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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/032,498	01/02/2002	Hisayoshi Ohba	108066-00047	6989

7590 08/04/2003

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EXAMINER

LIN, SUN J

ART UNIT	PAPER NUMBER
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2825

DATE MAILED: 08/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/032,498

Applicant(s)

OHBA ET AL.

Examiner

Sun J Lin

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-12 is/are allowed.
- 6) ☒ Claim(s) 13 is/are rejected.
- 7) ☒ Claim(s) 14-16 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01/02/2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. This office action is in response to application 10/032,498 filed on 01/02/2002.
Claims 1 – 16 remain pending in the application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 13 is rejected under 35 U.S.C. 102(e) as being unpatentable over U.S. Patent Application Publication No. 2002/0063335 to Ozawa et al.

4. As to Claim 13, Ozawa et al. show in Fig. 1 and teach the following subject matters:

- A semiconductor integrated circuit with dummy pattern – [title];
- A plurality of wiring patterns 10, 11 formed in an interconnecting wiring layer (i.e., Nth layer);
- Conductive dummy patterns (i.e., 5 sets of vertically oriented square conductive dummy metals 13) are inserted between the wiring patterns 10, 11;
- Conductive dummy patterns contain 5 sets of vertically oriented square conductive dummy metals 13 inserted continuously in the vertical direction perpendicular to wiring patterns 10, 11, which are adjacent and extend in the horizontal direction; and
- Conductive dummy patterns maintain a distance (i.e., first distance) from the adjacent wiring patterns 10 and 11.

Allowable Subject Matter

5. Claims 1 – 12 are allowed. Claims 14 – 16 are objected to as being dependent upon a rejected base claim, but they would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Those claims are allowed is because that the prior arts do not teach or suggest the following subject matters as recited in independent Claims 1 and 8, and dependent Claims 14 – 16:

- An LSI design method including a formation of wiring patterns in an interconnection wiring layer, the method comprising a layout process, a dummy pattern generation process and a capacitance extraction process as recited in **Claim 1**;
- An LSI design computer program for executing in a computer an LSI design process including a formation of wiring patterns in an interconnection wiring layer, the LSI design process comprising a layout process, a dummy pattern generation process and a capacitance extraction process as recited in **Claim 8**;
- The semiconductor device according to Claim 13, wherein a characteristic of capacitance between said adjacent wiring patterns includes a first region and a second region as recited in **Claim 14**;
- The semiconductor device according to Claim 13, wherein a characteristic of capacitance between said adjacent wiring patterns includes a first region and a second region as recited in **Claim 15**; and
- The semiconductor device according to Claim 13, wherein a characteristic of capacitance between said adjacent wiring patterns includes a first region and a second region as recited in **Claim 16**.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sun J. Lin whose telephone number is (703) 308-4916. The examiner can normally be reached on Monday-Friday (9:00AM-6:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Smith can be reached on (703) 308-1323. The fax phone numbers

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for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

Sun James Lin
Art Unit 2825
July 21, 2003


VUTHE SIEK
PRIMARY EXAMINER